

REMARKS

Claims 1, 4-7 and 10-11 are amended. New Claim 17 is added. Claims 1-17 are pending. No new matter is added as a result of the claim amendments. Support for the claim amendments can be found at least on page 6, lines 8-14, and on page 8, lines 15-16, of the instant application.

103 Rejections

According to the instant Office Action, Claims 1-8 and 10-16 are rejected under 35 U.S.C. §103(a) as being unpatentable over Carobolante (US 6,084,378) in view of Alfrey (US 2003/0103364). Furthermore, Claim 9 is rejected under 35 U.S.C. §103(a) as being unpatentable over Carobolante in view of Alfrey, and further in view of Walter (US 2003/0155813). Applicants have reviewed the cited references and respectfully submit that the embodiments of the present invention set forth in Claims 1-16 are neither anticipated nor rendered obvious by Carobolante in view of Alfrey, and further in view of Walter, in any combination.

The Examiner is respectfully directed to independent Claim 1 which is drawn to a differential load driving circuit. Claim 1 is reproduced below in its entirety for the convenience of the Examiner.

“1. A differential load driving circuit comprising:

a plurality of power switches selectively coupled to a load to supply current to said load;

a plurality of power switch driving circuits operable to control the conduction state of said power switches and to selectively couple at least one of said plurality of power switches to a PWM signal;

at least one linear current source; and

at least one current source switch operable to couple said at least one current linear source to said load;

wherein said linear current source is coupled to said load to deliver current to said load during low current conditions at said load, and said PWM signal coupled to said load to deliver current to said load during high current conditions as said load, wherein a switchover point between said linear current source and said PWM signal is selected to achieve a specified ripple current at said load" (emphasis added).

Independent Claims 4, 7 and 11 contain limitations similar to those contained in Claim 1. Claims 2 and 3 depend from Claim 1 and set forth additional limitations of the embodiments of the claimed invention. Claims 5 and 6 depend from Claim 4 and set forth additional limitations of the embodiments of the claimed invention. Claims 8-10 depend from Claim 7 and set forth additional limitations of the embodiments of the claimed invention. Claims 12-16 depend from Claim 11 and set forth additional limitations of the embodiments of the claimed invention.

Applicants respectfully submit that Carobolante does not anticipate or render obvious the embodiments of the invention that are set forth in Claims 1, 4, 7 and 11. While Carobolante mentions ripple current (e.g., in column 2, starting at line 48), Applicants respectfully submit that Carobolante does not show or suggest switching between linear and PWM operation in order to control ripple current. Carobolante appears only to address controlling slew rate of an inductive load.

Applicants respectfully further submit that neither Alfrey nor Walter overcomes the shortcomings of Carobolante. Neither Alfrey nor Walter appears to mention ripple current or its equivalent.

In summary, Applicants respectfully submit that, in any combination, Carobolante, Alfrey and Walter do not show or suggest the limitations of independent Claims 1, 4, 7 and 11 and that these claims are in condition for allowance. Claims 2-3, 5-6, 8-10 and 12-16 are dependent on either Claims 1, 4, 7 or 11 and recite additional limitations. As such, Applicants also respectfully submit that, in any combination, Carobolante, Alfrey and Walter do not show or suggest the additional claimed features of the present invention as recited in Claims 2-3, 5-6, 8-10 and 12-16, and that these claims are also in condition for allowance as being dependent on an allowable base claim. Therefore, Applicants respectfully assert that the basis for rejecting Claims 1-16 under 35 U.S.C. §103(a) is traversed.

Conclusions

In view of the foregoing amendments and remarks, Applicants respectfully submit that the pending claims are in condition for allowance. Applicants respectfully request reconsideration of the Application and allowance of the pending Claims.

If the Examiner determines the prompt allowance of these Claims could be facilitated by a telephone conference, the Examiner is invited to contact the undersigned.

Respectfully submitted,

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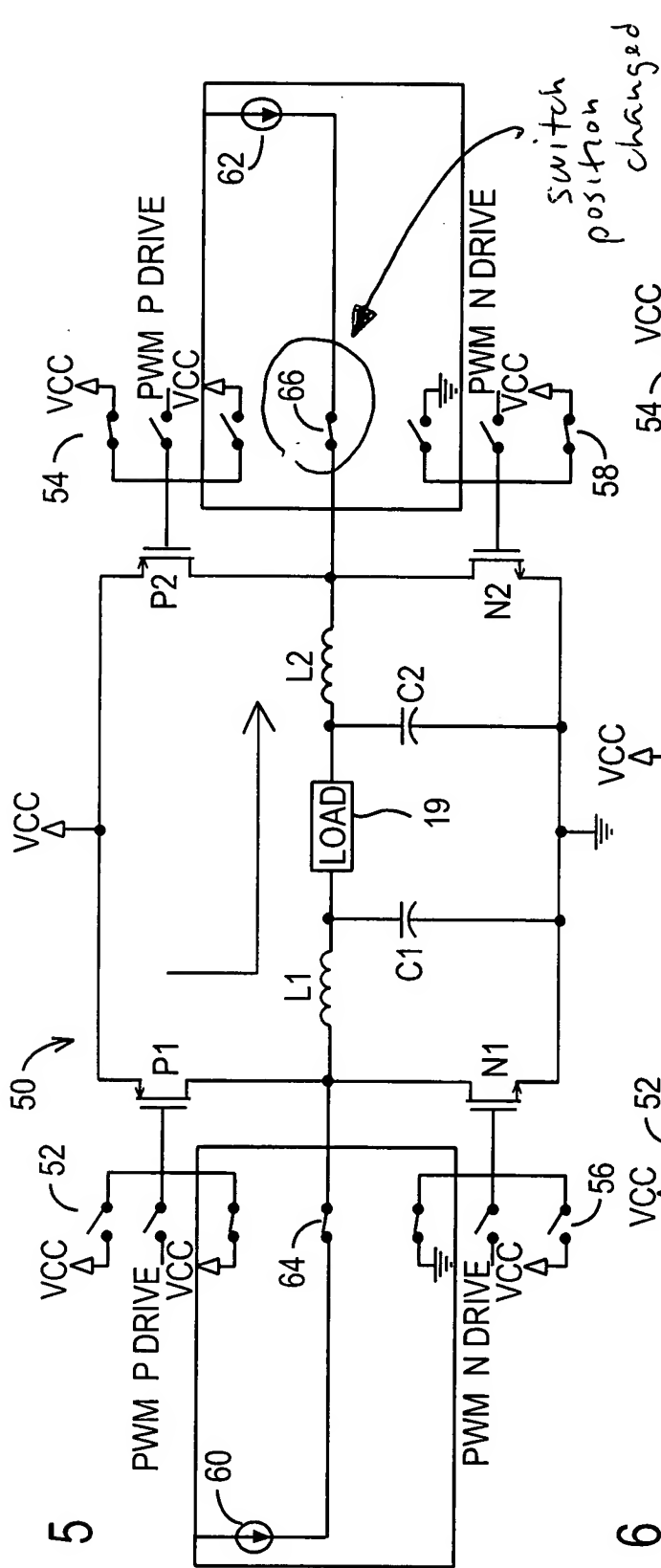


FIG. 5

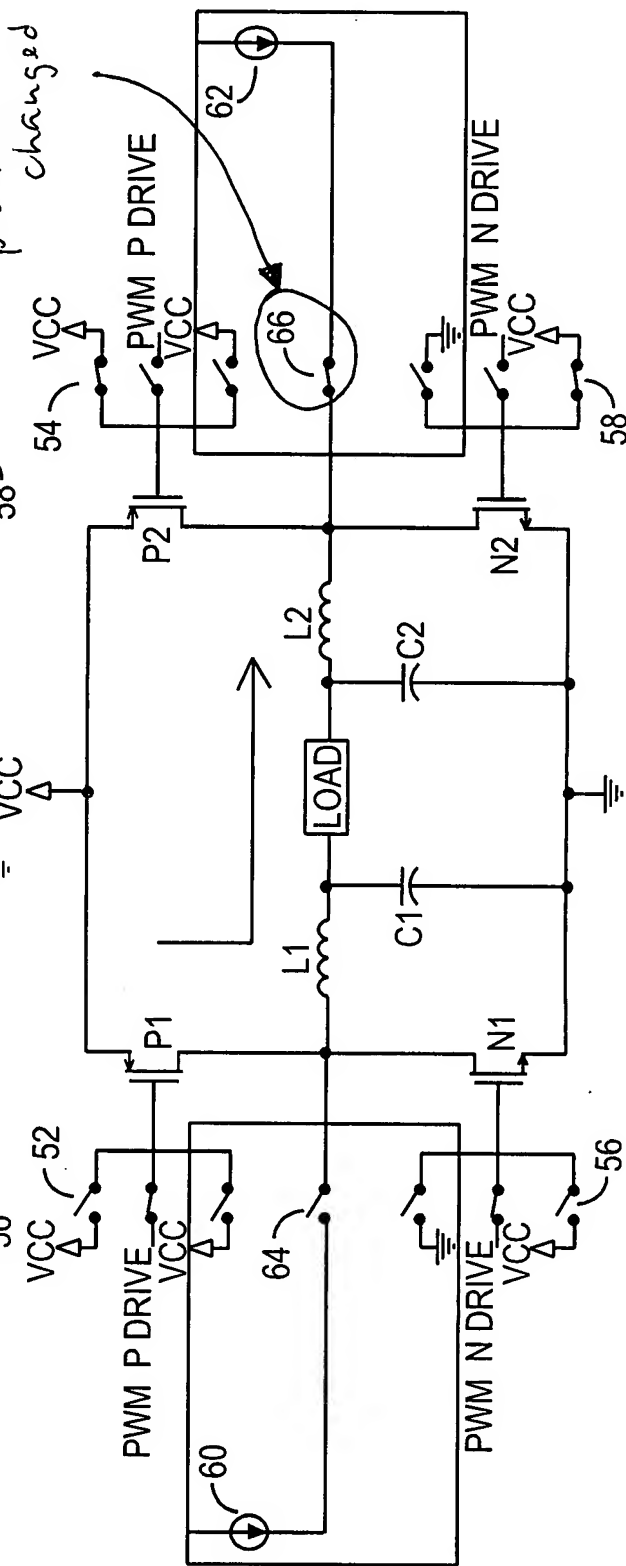


FIG. 6

